

Contralateral Femoral Snare Stabilization to Salvage Loss of Left Renal Branch Access

During TAMBE Repair

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PURPOSE

Loss of target-vessel access after attempted deployment of a bridging stent during branched endovascular aortic repair can threaten visceral perfusion and procedural completion. We describe a transfemoral snare-assisted bailout technique used to rescue a maloriented left renal stent during thoracoabdominal multibranch endoprosthesis (TAMBE) repair.

BACKGROUND

A 54-year-old man presented with chest, back, and abdominal pain and was found to have a penetrating aortic ulcer with aneurysmal degeneration of the supraceliac aorta. Open repair was discussed with tertiary referral centers; endovascular repair was recommended, with anatomy suitable for a TAMBE device.

SURGICAL PROCEDURE

- Right axillary and bilateral femoral access, with bridging VBX stents placed to the celiac artery, superior mesenteric artery, and bilateral renal arteries
- Loss of wire access in the initially placed renal stent during attempted bridging stent advancement results in transverse malrotation
- Deployment of 6 × 79-mm VBX within left renal artery complicated by transverse rotation of the stent resulting in loss of renal artery access
- Cephalad redirection with a TourGuide steerable sheath from above provided temporary repositioning but insufficient support for recannulation.
- Contralateral femoral access was upsized to an 8-French sheath. A Cook Indy over-the-wire snare was used to capture a single proximal laser-cut stent edge. Controlled snare tension stabilized the VBX in a cephalad orientation
- Stent lumen cannulated via axillary approach followed by advancement of a catheter, stiff wire, and sheath. A 7 × 79-mm VBX was deployed to bridge from the salvaged renal stent to the TAMBE renal portal

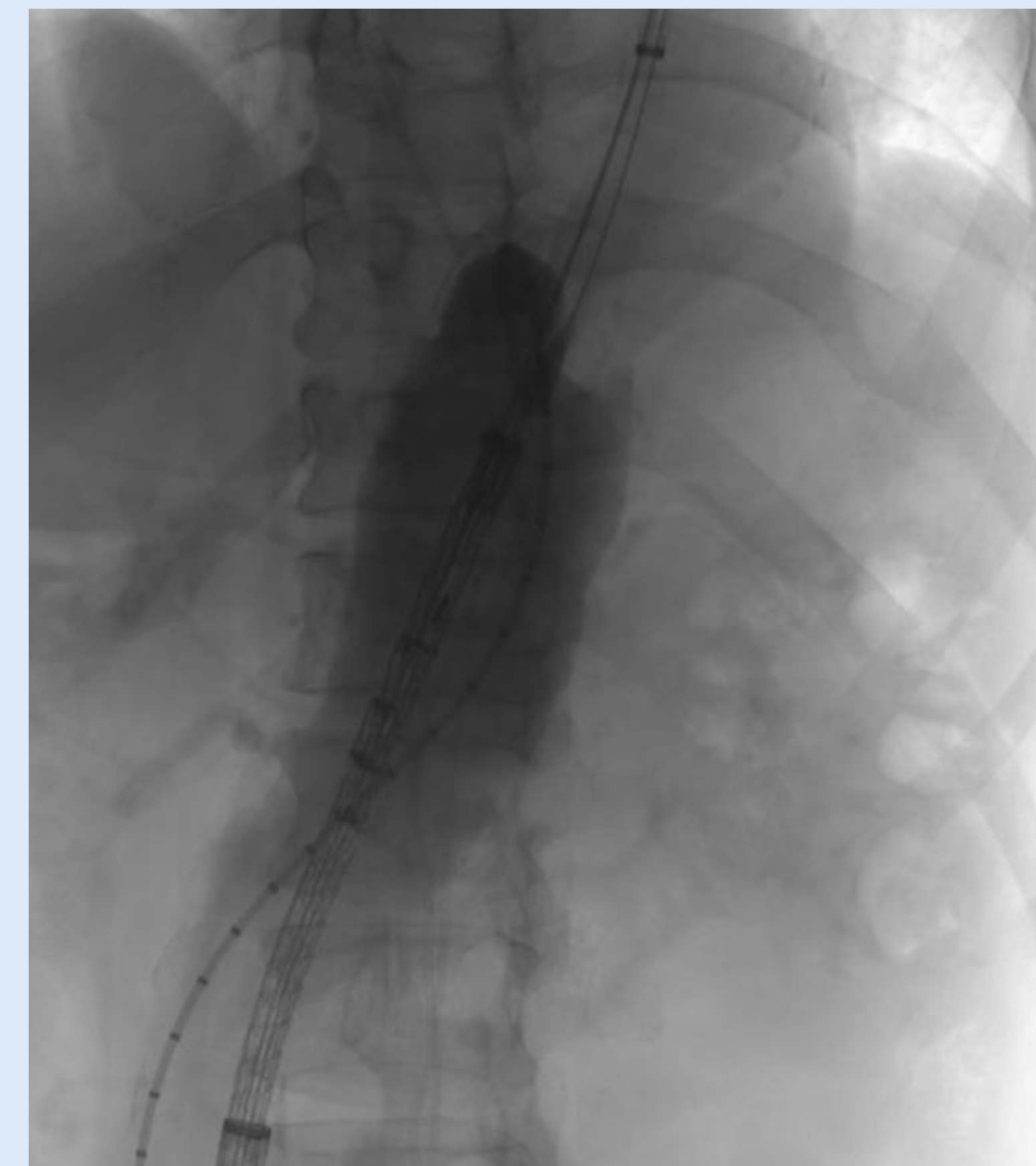


Figure 1. Supraceliac penetrating aortic ulcer with aneurysmal degeneration

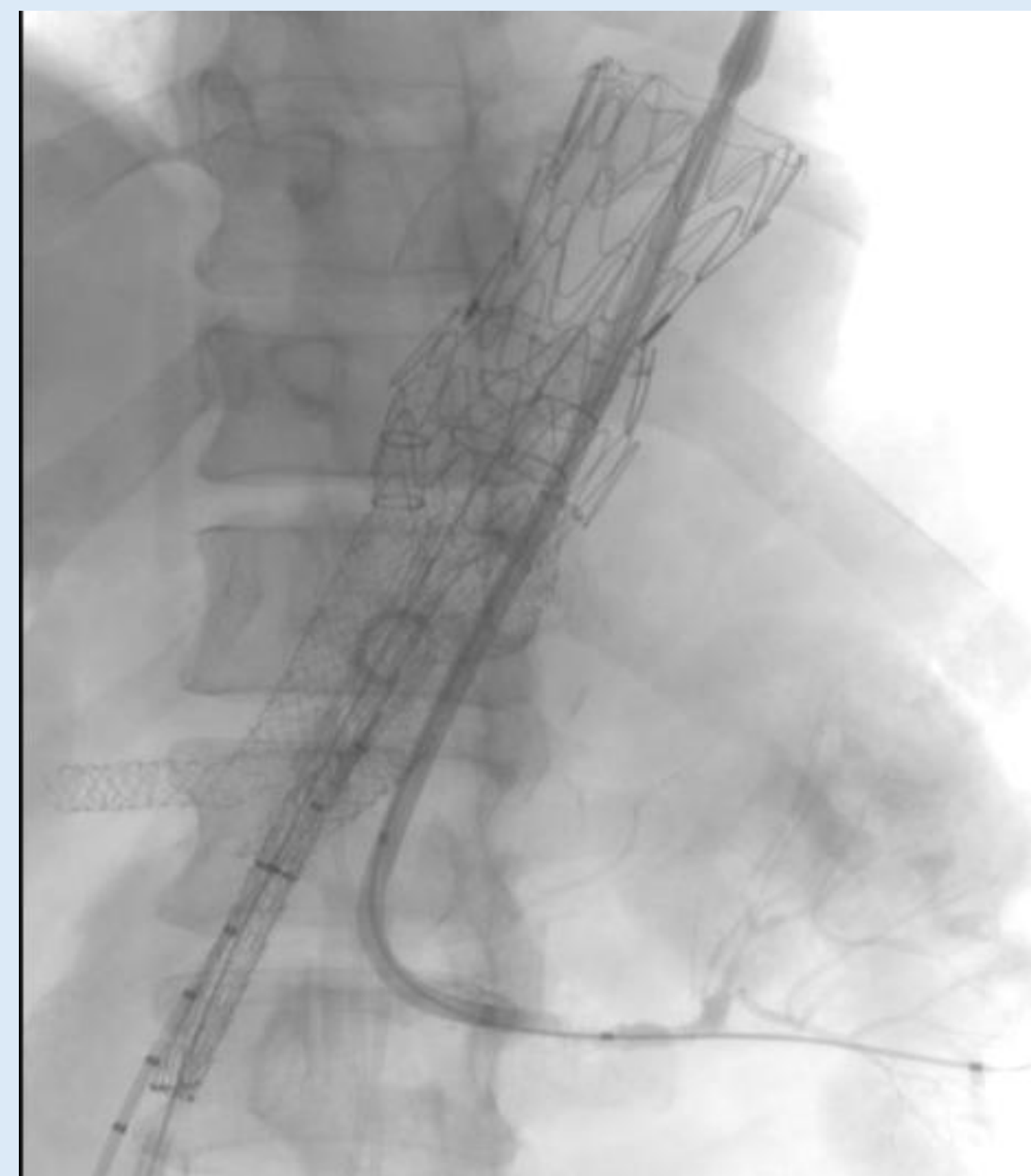


Figure 2. Successful cannulation of left renal artery



Figure 3. Snared stent with cannulation from above with bridging VBX



Figure 4. Completion shot after TAMBE

RESULTS

Snaring one proximal stent apex provided sufficient countertraction to prevent recurrent horizontal collapse during cannulation from above. Stable intraluminal access was re-established through the original 6 × 79-mm VBX and into the native left renal artery. A stiff wire and delivery sheath were advanced across the rescued segment without displacement, permitting deployment of the 7 × 79-mm VBX with overlap extending from the renal stent to the TAMBE portal. Balloon expansion established a continuous bridging-stent construct between the left renal artery and device portal. TAMBE deployment was subsequently completed, followed by placement of a distal 28-mm Gore CTAG component with adequate device overlap and extension into healthy infrarenal aorta. Completion angiography demonstrated preserved flow through the salvaged left renal branch as well as the celiac, superior mesenteric, and right renal branches, with exclusion of the aneurysmal segment. No additional renal intervention, branch sacrifice, or open conversion was required. The patient awakened with preserved bilateral lower-extremity strength and no immediate neurologic or clinically apparent visceral ischemic complication. This bail-out technique has not been described in literature before. Postoperative CT at one month showed aneurysmal exclusion, patent visceral vessels, and no evidence of endoleak.

CONCLUSION

Contralateral femoral snare fixation of a single proximal stent edge can convert an unstable, transversely oriented renal stent into a supported target for recannulation from above. This readily available bailout strategy may preserve branch patency and avoid renal branch loss or conversion during TAMBE and other branched endovascular aortic repairs.